

**REMARKS**

This responds to the Office Action mailed on February 18, 2004.

Claims 13, 17 and 23 are amended, claim 15 is canceled; as a result, claims 13-14, 16-27, and 29-44 are now pending in this application.

**§103 Rejection of the Claims**

Claims 13-27 and 29-44 were rejected under 35 USC § 103(a) as being unpatentable over Tsao et al. (U.S. 6,672,947) in view of Kutlu (U.S. 6,472,762). Applicant respectfully traverses the rejection and requests the Office to consider the following.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (M.P.E.P. § 2143 8<sup>th</sup> Ed, Rev.1).

Claim 13 as amended includes the limitation of "attaching said die to the heat spreader by metal to metal diffusion bonding". Neither Tsao nor Kutlu teach or suggest this limitation. Because all the claim limitations are not found in the cited references, withdrawal of the rejections is respectfully requested.

Applicant notes that claims 14-16 depend from claim 13 as amended. Because all the claim limitations of these claims are also not found in the cited references, withdrawal of the rejections is respectfully requested.

Claim 17 as amended includes the limitation of "forming at least one build-up layer over the die and heat spreader". Neither Tsao nor Kutlu teach or suggest this limitation. Because all the claim limitations are not found in the cited references, withdrawal of the rejections is respectfully requested.

Applicant notes that claims 18-21 depend from claim 17 as amended. Because all the claim limitations of these claims are also not found in the cited references, withdrawal of the rejections is respectfully requested.

Claim 23 as amended includes the limitation of “forming a metallization layer on said die”. Neither Tsao nor Kutlu teach or suggest this limitation. Because all the claim limitations are not found in the cited references, withdrawal of the rejection is respectfully requested.

Claim 24 includes the limitation, among others, of “singulating said plurality of conjoined microelectronic packages”. Tsao and Kutlu do not teach or suggest singulation as claimed. Because all the claim limitations are not found in the cited references, withdrawal of the rejections is respectfully requested.

Applicant notes that claims 25-27 and 29-31 depend from claim 24. Because all the claim limitations of these claims are also not found in the cited references, withdrawal of the rejections is respectfully requested.

Claim 32 includes the limitation, among others, of “depositing a metallization layer on a back surface of the die”. Tsao and Kutlu do not teach or suggest depositing a metallization layer as claimed. Because all the claim limitations are not found in the cited references, withdrawal of the rejections is respectfully requested.

Applicant notes that claims 33-44 depend from claim 32. Because all the claim limitations of these claims are also not found in the cited references, withdrawal of the rejections is respectfully requested.

**AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111**

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Assignee: Intel Corporation

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**Conclusion**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, John Greaves at (801) 278-9171, or Applicant's below-named representative at (612) 349-9592 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

CHENG-YI LIU ET AL.

By their Representatives,

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Date May 18, 2004

By Ann M. McCrackin  
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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 18th day of May, 2004.

Name

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Signature

Kacia Lee